



TRIBAL  
HEALTH

# CLIMATE CHANGE

## AND INDIGENOUS HEALTH



# ARE WE OUT OF TIME?

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Are we out of time when it comes to climate change? “Almost” is the answer, according to the latest report from the [Intergovernmental Panel on Climate Change](#) (IPCC.) Part of the United Nations, the IPCC regularly releases reports on climate-related topics.

Based on the work of thousands of scientists, the “Working Group III contribution to the Sixth Assessment Report of the IPCC” found that we still haven’t made the right changes to keep climate change within a safe 2.7 Fahrenheit (1.5 degrees Celsius) limit — and that we don’t have much time left to take action. While the report was called “absolutely harrowing” by one climate activist, it did map strategies (such as scaling up solar energy and preserving forests) to a sustainable future.

No one is a climate clairvoyant. But even in a best case scenario, we can count on droughts and heat waves, wildfires and rising sea levels, to unleash a cascade of impacts that hit everyone in some form.

You might be thinking, what does this have to do with healthcare? Especially Indigenous healthcare? The answer is – quite a lot.

**40%** of Tribes live in Alaska Native communities – where melting glaciers and thawing permafrost are impacting critical infrastructure and traditional livelihoods.

Coastal Indigenous communities eat **15 times** as much seafood as other Americans — food heavily impacted by pollution, warming waters and ocean acidification.

Households on Native lands are less likely to get federal help preparing for disasters. Of the 59,303 properties that have received FEMA grants since 1998, just **48 were on Tribal lands.**

The **most polluted cities with the unhealthiest air** – Phoenix, Seattle, Denver, New York, and Los Angeles – also have the highest Indigenous populations.



# CLIMATE HEALTH IS HUMAN HEALTH

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In our air-conditioned, bottled-watered world, it's easy to think of the environment as something we can escape by staying indoors. But even if a slightly elevated sea level or 1 degree change in the planetary temperature sound minor, these changes unleash a domino effect across food security, infectious disease, water supply, air quality, and other key factors of our existence. Climate change comes to everyone's doorstep.

Among the vulnerable populations disproportionately impacted by climate change, [Indigenous peoples are among most severely affected.](#)



## A PLANET - AND PATIENTS - IN PERIL

Imagine Hospital X in the near future. The emergency department is crowded with patients dealing with heat stroke and asthma from poor air quality. Infectious diseases are on the rise; allergy attacks, ticks, and mites are more common, thanks to extended growing seasons; recurring floods cause waterborne illness. The ED is also crowded from the rising number of patients who've migrated from regions impacted by wildfires, drought, and higher sea levels. Power outages frequently impair hospital equipment and sometimes mean the loss of insulin and other medications.

That's inside hospital walls. Outside, people struggle with food insecurity, unclean water, and deteriorating mental health. Others can't access treatment because of natural disasters and extreme weather events.

This might sound like a dystopian film, but it's a likely future scenario – especially in disadvantaged communities.

# CLIMATE TROUBLE IN INDIGENOUS COMMUNITIES

Tribal nations face extreme healthcare disparities, from high rates of diabetes and hypertension to being less likely than white Americans to receive an early cancer diagnosis or any treatment at all. Resource shortages and culturally disconnected hospital staff further compromise care. Because of these and other factors, Indigenous Americans have the lowest life expectancy of any US ethnic group.

But health inequity isn't Native communities' only climate-related vulnerability. Many Tribal nations are closely connected to the natural world through farming, hunting, and fishing – and many reside in flood plains, arid regions, or other areas vulnerable to extreme weather events.

## FIRE, WATER, AND AIR: THE IMPACTS

Climate change is already affecting Indigenous communities in several ways:

- Warming waters and ice shelf melting can contaminate shellfish, impact wild salmon, and lead to new disease vectors for Alaskan natives, while Southwestern droughts are reducing the Navajo Nation's drinking water.
- Animal extinction can cause loss of both meat and agricultural food sources. Consider mountain lions, which contribute to ecosystem resilience by controlling the deer population and helping overgrazed vegetation recover – but they're losing habitat and genetic diversity.
- Air pollution can worsen respiratory diseases like COPD and trigger asthma attacks, both of which are [higher among Indigenous American populations](#). Wildfires can devastate both Tribal ancestral lands and budgets – and worsen smoke inundation.





# HEALTHCARE & CLIMATE CHANGE

## **6 STEPS TO A GREENER FUTURE FOR TRIBAL NATIONS**

While many people are familiar with "climate change" terminology, the call for "climate and health adaptation" hasn't gotten quite as much attention. But that's exactly where all of us can play an active role – even if we're not politicians, UN leaders, or environmental scientists.

Climate and health adaptation involves strategies to protect our health from climate-related impact. Tired, busy healthcare professionals might feel powerless when it comes to tackling carbon emissions – but they are well positioned to help specific populations deal with intensifying impacts on our health.

The following 6 practices can mitigate climate change impacts in Tribal nations.

# #1. TURN YOUR FACILITY GREEN.

Hospital lights burn day and night; departments print pounds of paper; discarded plastic and power-hungry equipment drive up a facility's carbon footprint. In fact, hospitals produce an [average of 26 pounds of waste per staff bed every day](#). It's no surprise that the healthcare industry ranks #2 in high energy consumption.

Does your facility have a sustainability task force? Consider starting one. A few climate-friendly improvements include:

- Reducing red bag waste and single-use devices
- Exploring mass transit and telemedicine to reduce auto travel
- Using energy-efficient LED lights and occupancy sensor switches
- Promoting plant-based cafeteria meals







## #2. COLLABORATE WITH TRIBAL COMMUNITY LEADERS.

Policies that impact Tribal nations shouldn't just give Native leaders the proverbial "seat at the table" – those leaders should lead the table. Indigenous leaders know their communities and environmental factors best. External healthcare systems should incorporate their data and knowledge in policy, instead of treating them as an afterthought in climate adaptation initiatives.

This can involve a learning curve, such as understanding that tribes may view physical health as influenced by cultural, mental, spiritual, and environmental factors. The onus is on public health teams to adapt to Tribal nations' cultural standards, heed their voice on community impacts, and honor their sovereignty in managing funding opportunities and collaborative initiatives.



# #3. WORK WITH CLIMATE CHANGE GROUPS.

Climate and health adaptation is a community effort – it can't be successful any other way. Instead of trying to go it alone, healthcare professionals and facilities should reach out to both local and national sustainability organizations. Find out how you can partner to create toolkits, conferences, health impact assessments, and other resources to drive action and spread awareness of climate and health risks.

A few suggestions include The Bureau of Indian Affairs' Tribal Resilience Program, the Environmental Protection Agency, regional Climate Adaptation Science Centers, and the Tribes and Climate Change Program of the Institute for Tribal Environmental Professionals.





## #4. BUILD TRAINING AND EDUCATION PATHWAYS.

Climate and health adaptation should be a vibrant conversation in the healthcare industry. But it's often an afterthought.

How to help: invite guest speakers to your facility and work with your communications team to develop training modules. Also consider joining groups like the Medical Consortium on Climate and Health and Medical Students for a Sustainable Future.

Some schools like the Yale School of Medicine and UC Berkeley offer continuing medical education credits for courses on climate change and patient health. If you're involved with a medical school or teaching hospital, incorporate content on climate change impact to your curriculum.



# #6. EDUCATE YOUR PATIENTS.

Climate change can be daunting in its complexity – but you can help your patients understand how it might affect their health. Talk to them about the effect on their conditions and how they can manage them in a changing world.

A few ideas include:

- Connecting patients with asthma to an app that tracks air quality
- Helping patients who use refrigerated medications find a backup resource during an outage or evacuation
- Creating a crisis plan for people dependent on dialysis in case of a natural disaster or extreme weather event







## #7. INCREASE INDIGENOUS REPRESENTATION.

Indigenous physicians and nurses can bring a depth of understanding to both patient needs and environmental issues in Tribal nations. Indigenous professionals in the green sector can play a vital role in shaping critical climate strategies.

But fewer than 1% of medical students are Native; and 43% of medical schools have no Native students at all. White people hold [more than 4 of 5 positions in the sustainability field.](#)

Healthcare workers can start pipeline and mentorship programs to build clinician diversity – and they can partner with Tribal community organizations to increase academic pathways to green-collar jobs.



# SHAPING A HEALTHIER FUTURE

In an interdependent world, there's no hiding from climate change. If the planet becomes ill with plastic-choked oceans, rising temperatures, and high carbon emissions, we will become ill too. Underserved populations like Indigenous communities will feel these impacts the first and the most.

But climate and health adaptation opens the door to a healthier future. Education and collaboration are powerful steps to effective initiatives. As our changing climate impacts public health, clinical workers have the privilege of wielding that power and helping their patients thrive in a yet to be undetermined world.

**Start your healthcare transformation today.**

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 [www.tribalhealth.com](http://www.tribalhealth.com)



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# RESOURCES

- <https://toolkit.climate.gov/topics/tribal-nations>
- <https://www.ipcc.ch/>
- <https://www.ipcc.ch/report/ar6/wg3/>
- <https://www.ncai.org/policy-issues/land-natural-resources/climate-change#>
- <https://www.lung.org/research/trends-in-lung-disease/asthma-trends-brief/current-demographics#raceEthnicity>
- [https://noharm-uscanada.org/sites/default/files/documents-files/67/Addressing\\_Climate\\_Change.pdf](https://noharm-uscanada.org/sites/default/files/documents-files/67/Addressing_Climate_Change.pdf)
- <https://bulletin.facs.org/2015/05/strategies-for-sustainability-going-green-in-the-or/>
- <https://www.usatoday.com/in-depth/news/education/2021/04/30/native-americans-blocked-green-jobs-middle-class/4715621001/>
- <https://www.nytimes.com/2021/06/27/climate/climate-Native-Americans.html>
- <https://e360.yale.edu/features/how-native-tribes-are-taking-the-lead-on-planning-for-climate-change>

